

### REMARKS

The present amendment is a Response to the Office Action mailed March 1, 2006. Claims 1-27 and 41-43 will be pending upon entry of the present amendment. Claims 5, 12, and 20-22 are currently amended. Claims 17 and 18 are withdrawn, and claims 28-40 are cancelled. New claims 41-43 have been added. No new matter has been added to the application.

Applicant thanks the Examiner for indicating the allowability of the subject matter of claims 14-16.

#### Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 5 and 12 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which the applicant regards as his invention. These claims are herewith amended to more distinctly claim their respective subject matter.

#### Rejections Under 35 U.S.C. § 102(b)

Claims 1-13 and 19-27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Folsom (U.S. Patent No. 5,423,183). In the remarks that follow, when citing to specific text from Folsom, column numbers and line numbers will be separated by a colon, e.g. 4:22.

Claim 1 recites, *inter alia*, a first pump/motor having a first drive plate assembly *rigidly coupled* to a shaft, ... and a second pump/motor having a second drive plate assembly *rigidly coupled* to the shaft ....” Folsom fails to anticipate at least these limitations of claim 1. In rejecting claim 1, the Examiner cites Folsom’s seal disc 65 and end closure 36 as corresponding, respectively, to the first and second drive plate assemblies, and points to the input shaft 21 as corresponding to the shaft of claim 1. Accordingly, in order for Folsom to properly anticipate claim 1, the seal disc and end closure of Folsom must each be rigidly coupled to the input shaft.

Referring to Figures 1 and 1A, it may be seen that the seal disc 65 is actually the termination of the input shaft 21, and the two elements form a unitary part (*see* 6:24). However,

the seal disc is the right-hand end of the input shaft, with the shaft extending to the *left* from the disc, which is the opposite direction it would have to extend in order to make contact with, let alone be rigidly coupled to, the end closure. The shaft that extends to the right of the input shaft 21, toward the end closure, is not the input shaft, but rather the output shaft 88. Nor can the seal disc 65 be considered to be rigidly coupled to the output shaft 88, since the input shaft, of which the seal disc is a part, and output shaft rotate independently of each other. Folsom states, “[t]he bearing 84 allows the input shaft and the output shaft to turn independently of each other ...” (6:53). The bearing 84 can be seen in Figure 1A between the end of the output shaft 88 and the bearing bore 80 that penetrates the seal disc.

At the opposite (right-hand) end of Folsom’s device illustrated in Figure 1, Folsom’s end closure 36 is neither rigidly coupled to the input shaft 21 nor the output shaft 88. It will be recognized that the output shaft must be rotatable with respect to the housing of the device, else the device would be inoperative (see 5:40). The end closure 36 is a part of the housing 30, and is secured thereto by screws 40 (5:47), and is thus rigidly coupled to the housing, not the shaft. If the output shaft is rotatable with respect to the housing, the end closure cannot be rigidly coupled thereto. Furthermore, Figure 1C clearly shows bearings (unnumbered) positioned to facilitate the rotation of the shaft relative to the housing.

Clearly, Folsom fails to recite all the limitations of claim 1, which is thus allowable, together with dependent claims 2-7 and 41-43.

Claim 7 recites, “wherein a torque transferring assembly is coupled to the shaft, the torque transferring assembly generating a first radial force in a first direction, and the first and second pump/motors are oriented to ensure that when the first and second pump/motors stroke, they each generate a second radial force in a second direction, the second direction being opposite to the first direction.” With regard to the torque transferring assembly of claim 7, the Examiner has not pointed to any corresponding feature of Folsom that anticipates this limitation. Furthermore, even if such an assembly were present, Folsom fails to anticipate the other limitations of claim 7. For example, it will be recognized that, because of the angled surfaces of the swashplate 22, against which the pistons of the pump 20 and motor 29 bear, a radial load is applied to the swashplate by the pump and motor in a direction away from the angled faces of the

swashplate. At the same time, the swashplate is coupled to the output shaft 88 (5:23) such that the swashplate rotates with the output shaft around the longitudinal axis of the shaft (32:12). While applicant does not admit that Folsom's pump and motor are equivalent to the first and second pump/motors of claims 1 or 7, even if such were the case, the rotation of the swashplate will cause the radial force applied by the pump and motor to continually change direction with the rotation. Accordingly, even if the first direction of claim 7 could be established in the Folsom reference, which has not been shown, the radial force generated by the pump and motor cannot be shown to be opposite the first direction, because of the constant change in direction. For these reasons, claim 7 is allowable on its own merits, apart from its allowability as depending from an allowable base claim.

New claim 41 recites "wherein the first and second pump/motors are bent-axis pump/motors." Inasmuch as Folsom is directed to a swashplate pump, and a swashplate motor, Folsom does not anticipate or render obvious claim 41.

Claim 42 recites "an actuator mechanism coupled to the first and second pump/motors and configured to control displacement changes of each of the first and second pump/motors such that the displacement of each of the first and second pump/motors remains substantially equal to the other." Folsom fails to anticipate or render obvious this limitation of claim 42. Displacement of Folsom's pump 20 and motor 29 is controlled by changing the angle of the swashplate 22 relative to the output shaft 88 (see 9:1, *et seq.*). One of ordinary skill in the art will recognize that as the angle of the swashplate changes, the displacements of the pump and motor change in *opposite* directions; that is, as displacement of the pump increases, displacement of the motor decreases to a corresponding degree. Thus, there is only one swashplate angle at which the displacements are equal (the 1:1 ratio position, 10:33), and from that position, the relative displacements cannot be changed while remaining substantially equal to each other.

For at least the reasons outlined above, claims 41 and 42, which depend from claim 1, are allowable on their own merits.

Claim 8 recites, in part, "a first pump/motor having a first drive plate assembly rigidly coupled to ... a shaft [and] a second pump/motor having a second drive plate assembly rigidly coupled to ... the shaft." Folsom fails to anticipate these limitations of claim 8. Folsom

does not provide for any drive plate assembly rigidly coupled to any shaft. Accordingly, claim 8 and dependent claims 9-16 are allowable over Folsom.

Regarding the rejection of claims 19-22, the Examiner has not pointed to any feature of Folsom that is considered to anticipate the elements of these claims. In particular, claim 19 recites "a first seal positioned between the first bearing and a first drive plate of the first pump/motor and a second seal positioned between the second bearing and a second drive plate of the second pump/motor." The Examiner has not pointed to any corresponding seals of Folsom, and applicant is unable to find such seals.

Likewise, with regard to the rejections of claims 23 and 24, there is no indication in the Office Action as to the aspects of Folsom on which the Examiner relies in the rejections. Applicant respectfully requests that the Examiner more specifically indicate the features of Folsom that correspond to the elements of claims 19-24, or, alternatively, that the Examiner withdraw the rejections of these claims.

The Examiner has indicated that Folsom, in its normal and usual operation, would necessarily perform the steps of claims 25 and 27. Applicant respectfully disagrees.

Claim 25 recites, in part, "generating a separation force in a first direction when transferring torque to the secondary shaft; and stroking the first pump/motor to generate a first radial force in a second direction and stroking the second pump/motor to generate a second radial force in the second direction, the second direction being opposite to the first direction." Applicant cannot find any feature disclosed or suggested by Folsom that might create a separating force in a first direction as recited in claim 25. Furthermore, because Folsom's swashplate rotates with its output shaft, and because the direction of any radial force generated by Folsom's machine corresponds to the orientation of the angled face of the swashplate, Folsom cannot generate a radial force in a direction that is opposite to any direction that is independent of the swashplate. Folsom does not necessarily perform these steps, and so does not anticipate claim 25.

Claim 27 recites, *inter alia*, "dividing the common housing into first, second, and third regions wherein the first and the third regions contain the first and second pump/motors, respectively, and the second region contains the torque transferring device, the first bearing, and

the second bearing; filling the first and the third regions with sufficient oil to operate the pump/motors; and keeping the second region substantially sealed from the oil contained in the first and the third regions.” These steps are not disclosed by Folsom, nor are they inherent. Applicant cannot find any steps or features taught by Folsom that correspond to these limitations of claim 27, and therefore requests that the Examiner point specifically to the text or figures that support the rejection.

For the reasons provided, claims 25 and 27 are allowable over Folsom.

Claim 26 recites, in part, “rigidly coupling a first drive plate of a first pump/motor to a second drive plate of a second pump/motor through one or more shafts.” Folsom fails to anticipate this limitation of claim 26, and thus cannot support a rejection under section 102. Accordingly, claim 26 is allowable.

#### Conclusion

Overall, the cited reference does not teach or suggest the claimed features of the embodiments recited in independent claims 1, 8, 19, 23, 25, 26, or 27, and thus, such claims are allowable. Because the remaining claims depend from the allowable independent claims, and also because they include additional limitations, such claims are likewise allowable. If the undersigned representative has overlooked a relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found.

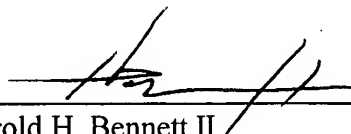
In light of the above amendments and remarks, Applicant respectfully submits that all pending claims are allowable. Applicant, therefore, respectfully requests that the Examiner reconsider this application and timely allow all pending claims. Further, in the event that the pending claims are allowed, applicant requests rejoinder of withdrawn claims 17 and 18, drawn to an unelected species, inasmuch as claim 8 is generic to these claims.

The Examiner is encouraged to contact Mr. Bennett by telephone at (206) 694-4848 to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is encouraged to contact Mr. Bennett by telephone to expeditiously correct such informalities.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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